

Panel #2: Local Response to H1N1 in Dallas County



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Health and Human Services

Non-pharmacological Response to a Pandemic

- Individual measures
 - ? Avoid others when sick
 - ? Cough/Sneeze hygiene
 - ? Hand washing
- Community measures
 - ? Risk communication
 - ? Social distancing
 - ? Assure clinical care (surge capacity)



Early Pandemic Period

March-May 2009

- New Influenza virus began to circulate in March 2009
- Cases were reported in Texas on April 15
- April 26, 2009: Public Health Emergency Declared by the United States
- Early cases were predominately in school-age children

School Closure Authority

- Texas Health and Safety Code, §81.084: Application of Control Measures to Property.
 - ? Describes how the department (DSHS) or health authority can place a property in quarantine if he/she suspects it to be contaminated with a communicable disease.
- Texas Government Code, Sec. §418.018: Movement of People.
 - ? Outlines that during a declared disaster, the governor may control the ingress and egress to and from a disaster area. This authority appears to be transferred under Sec § 418.108 to also allow for the county judge or mayor of a municipality under section (g) to control the ingress to and from a disaster area under his/her jurisdiction.
- Texas Administrative Code, §129.21: Requirements for Student Attendance Accounting for State Funding Purposes
 - ? Requires the Districts maintain records and make reports concerning student attendance.
- Individual school district policies

Centers for Disease Control and Prevention (CDC) Recommendations

May 1, 2009

- Consider dismissing students from schools with a confirmed or suspected case
- Broader school-dismissal recommendations were to be considered by local health authorities
- Closure was recommended to be for 14 days

Centers for Disease Control and Prevention (CDC) Recommendations

May 5, 2009

- Closure no longer recommended based on a single case confirmation
- Symptomatic persons should stay at home
- Cough/sneeze etiquette and hand hygiene should be emphasized

Pandemics & School Closure

- Schools closure is an important non-pharmacological control measure for pandemics¹
 - ? Classrooms are the most socially dense settings in our communities
 - ? School-age children often experience higher rates of disease²
- Determinants for when to close a school are not established³

1. CDC. February 2007. <http://www.pandemicflu.gov>

2. Hall, CB, et al. *J Infect Dis.* 1979; 140(4): 610-13

3. Carlo JT, Chung W. *Texas Medicine.* July 2009; 105(7): 21-26.

Conclusions during Spring 2009, Dallas County

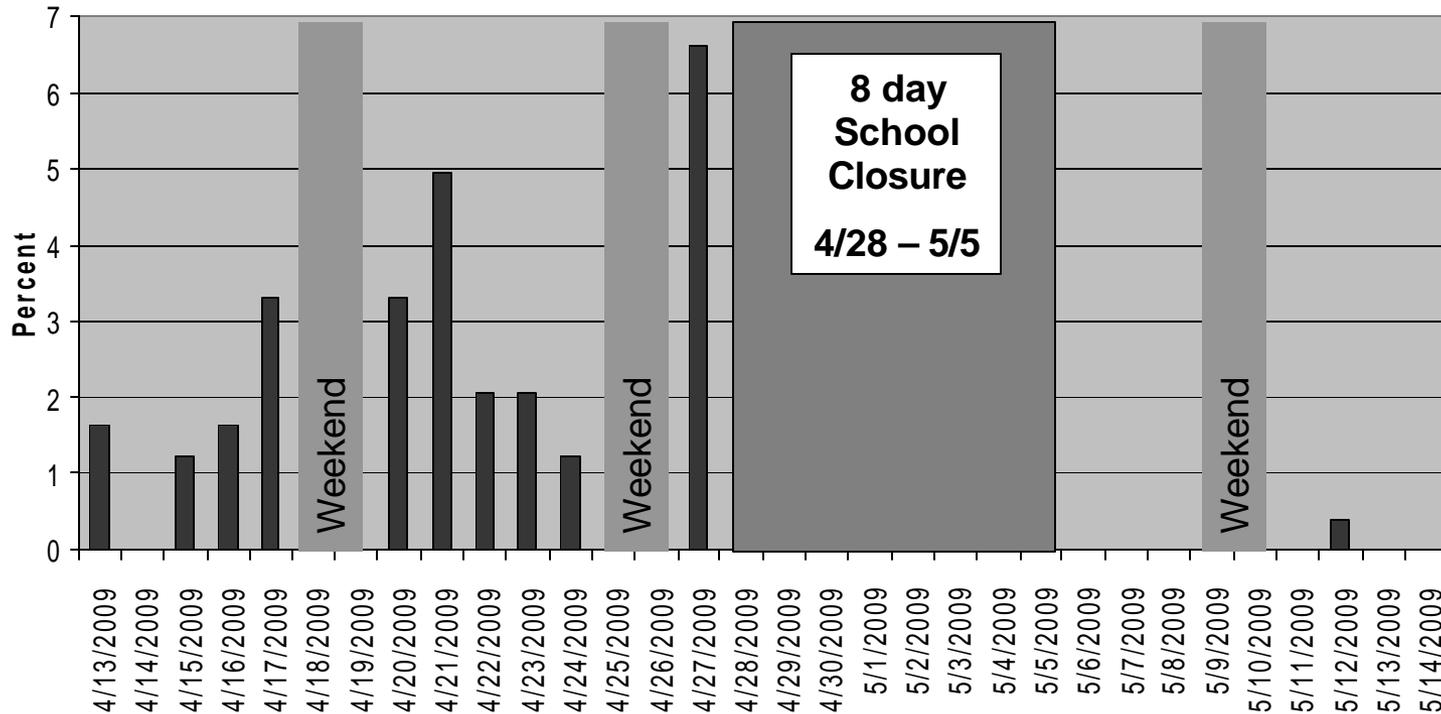
- Severity of illness did not appear to be higher than expected for seasonal influenza illness (Hospital and Emergency Department Data)
- Overall rates of absenteeism in Dallas County were not affected by the Spring Epidemic
- Many confirmed cases attended schools which did not experience outbreaks
- Schools with higher than expected and increasing absentee rates were identified

School Closures in Dallas County Spring 2009

- 4 elementary schools were closed from April 28 – May 5, 2009
 - ? 2,104 students missed 4-8 days of school
 - ? 81 children in 35 schools were confirmed as having H1N1 infections
- Data collected
 - ? Confirmed or probable cases
 - ? Contacts of cases
 - ? Severity of illness
 - ? Daily school absence percentage
 - ? Daily school absence percentage due to influenza-like illness
 - ? Emergency Department visits (ESSENCE)

Elementary School A

Percentage of Students Absent Daily due to Influenza-like Illness



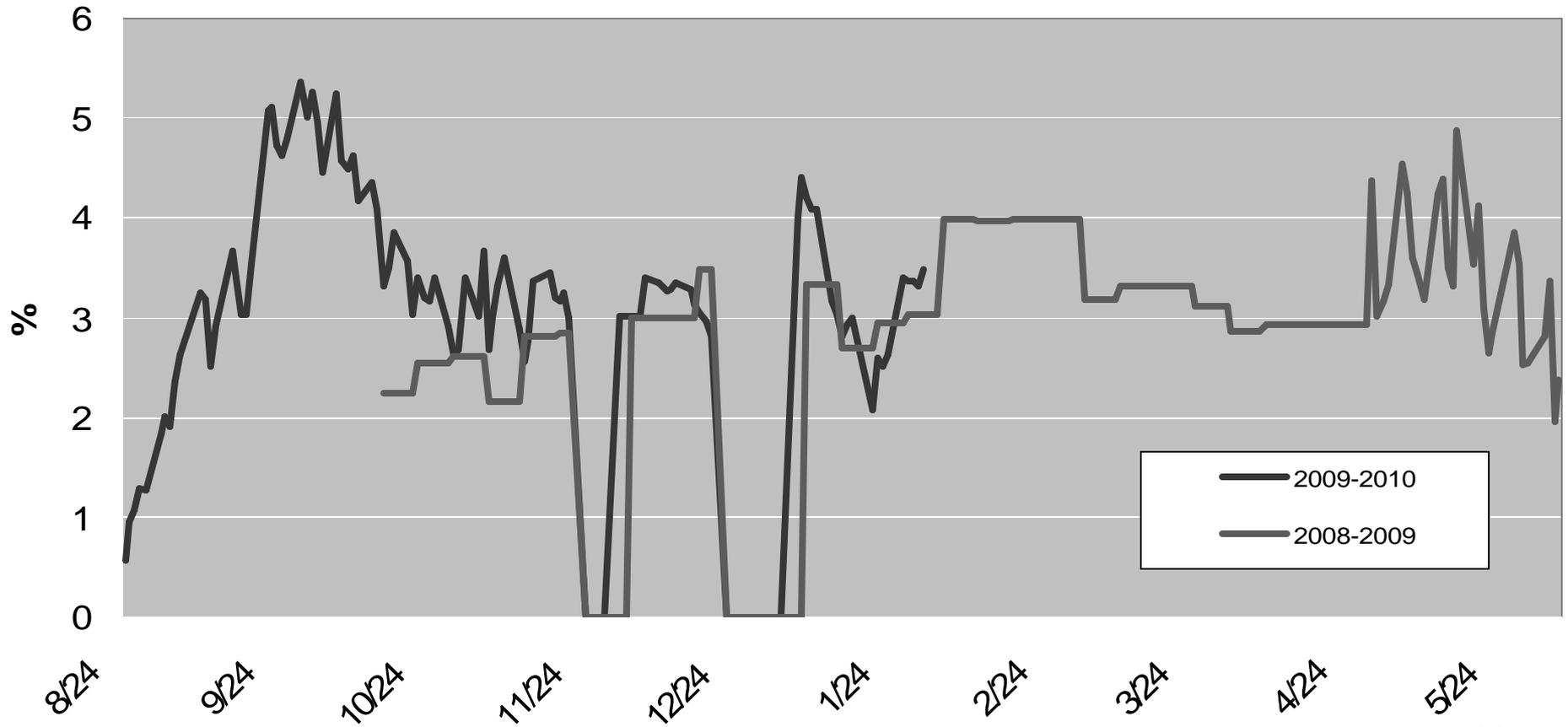
- Near complete decrease in influenza-like illness following school re-opening
- *Sustainable during a period of increasing influenza activity in the community?*

School Surveillance Data Dallas County, 2010

- Established in 2003
- 14 Independent School Districts voluntarily report daily
 - ? >510 Schools
 - ? >420,000 Students
 - ? >95% submission rate
- Absences and absences due to influenza-like illnesses are reported at each school

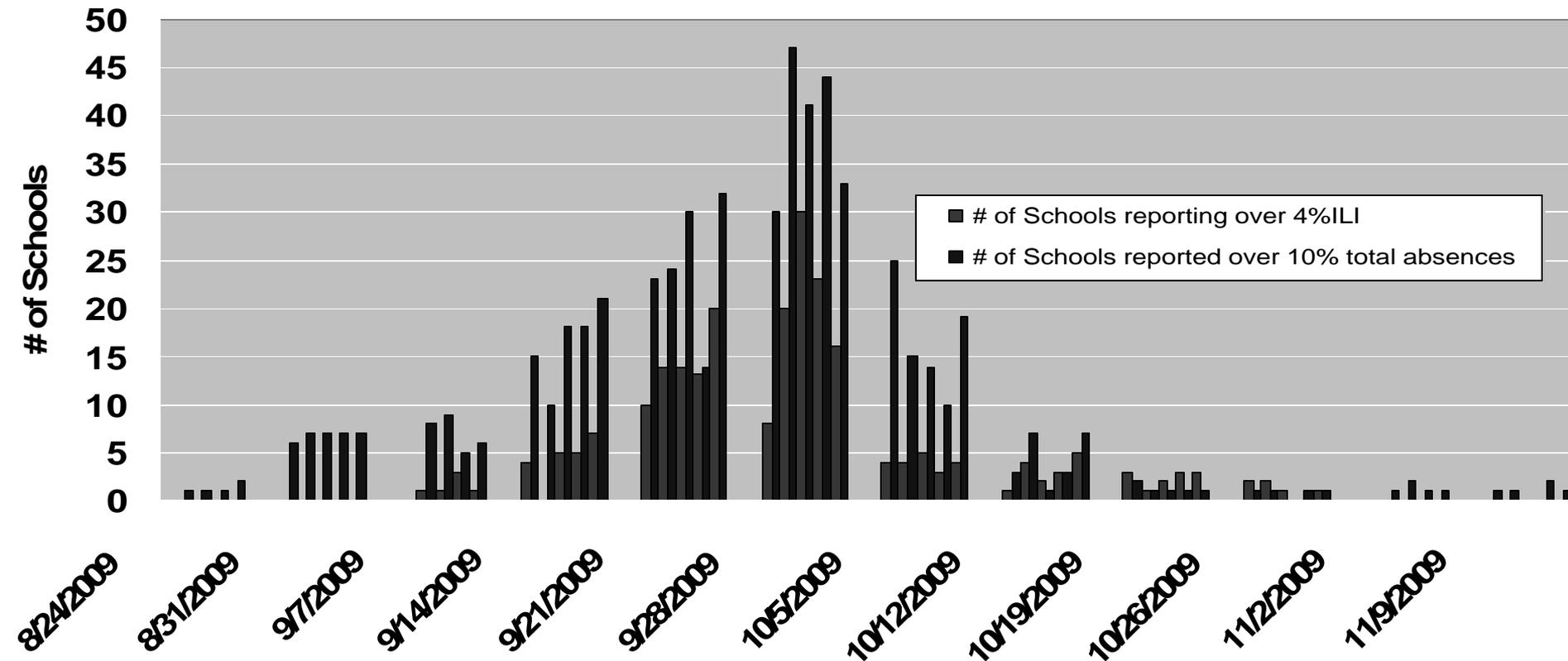
Dallas County School Absentee Rates, 2008-2010

School absence rates during Fall 2009 exceeded peak absence rates of the 2008-2009 Influenza Season



Impact of Influenza on School Absenteeism, 2009

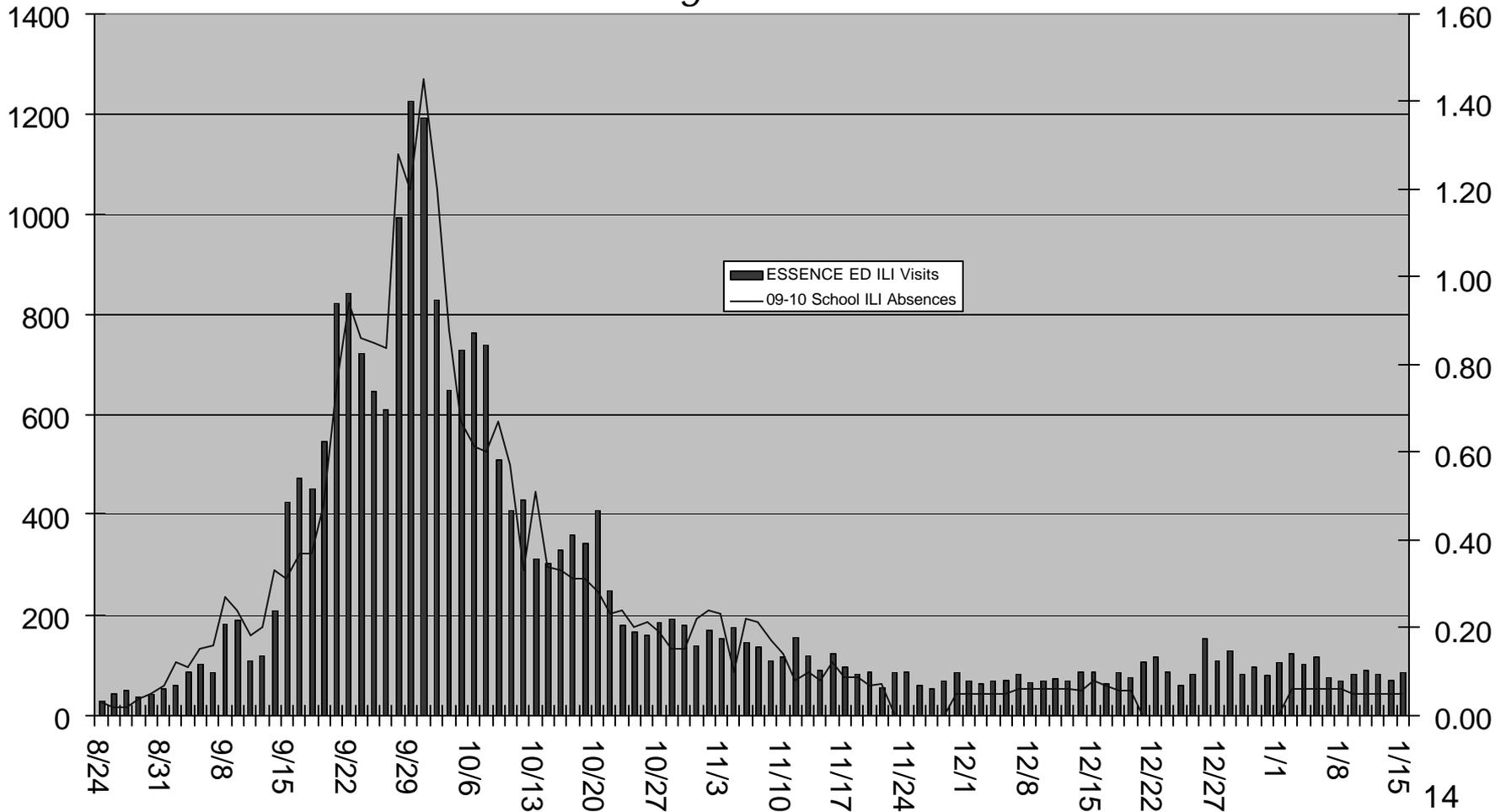
This type of data is utilized to determine whether interventions should be considered at individual schools



*ILI: Influenza-like illness

Correlation of School ILI* Absences and Emergency Department Visits, Dallas County, 2009-2010

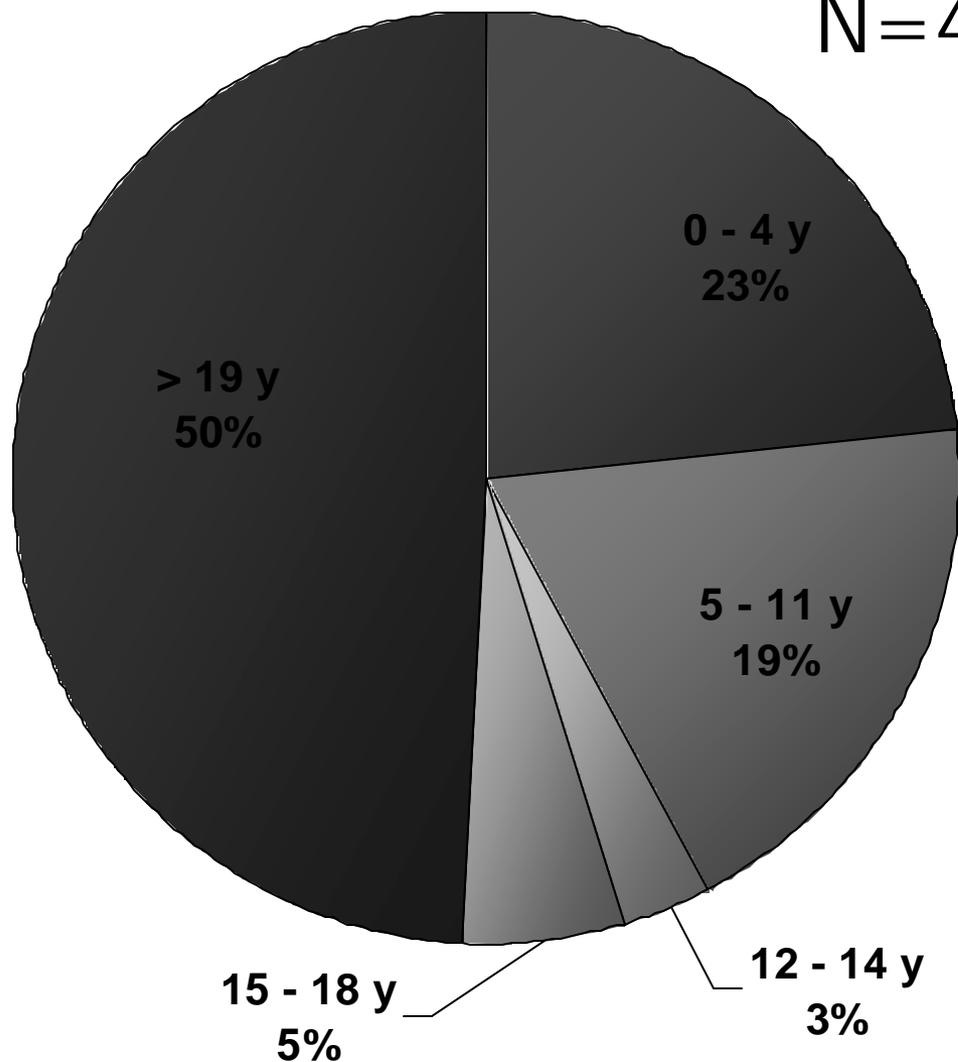
Emergency Department visits and school absences for ILI correlated well
during fall 2009*



* Influenza-like Illness

H1N1 Hospitalizations in School Children, Dallas County

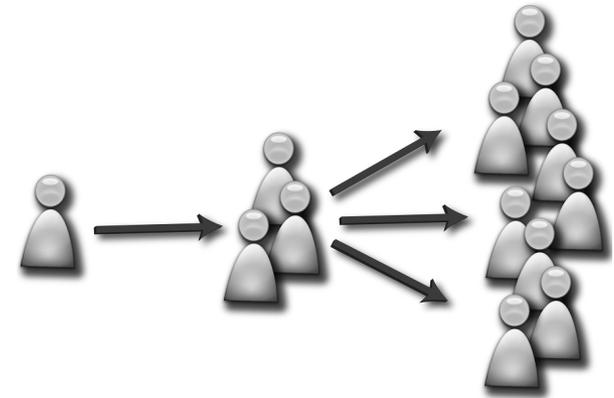
N=483



- 27% (137) of hospitalized cases were school-aged children
- 68% of cases had underlying medical conditions
- 4 deaths in children <18 years of age

Risk Communication

- Daily press conferences
- 1 on 1 interviews
- Press releases
- Health alerts to key stakeholders
- Weekly influenza report



Dallas County Health and Human Services 2009-2010 Influenza Surveillance Program

2009 Influenza A (H1N1) Report CDC Week 48--Week ending December 5, 2009

**2009 H1N1 Influenza virus has also been referenced as novel influenza A (H1N1) or as swine-origin influenza virus (S-OIV)*

Epidemiologic Overview

- During week 48, the percentage of tests from North Texas surveillance sites which were positive for RSV were above 10% for the 2nd consecutive week this season.
- Influenza activity remains low in Dallas County with the percentage of positive influenza tests

Lessons Learned– Community Mitigation

- Epidemiological data provided the guidance for key decisions
 - ? Local conditions including absences, severity of cases, and transmission dynamics assisted with school closure determination
 - ? Organized disease reporting systems through local partnerships such as schools and hospitals were essential
- An effective risk communication strategy can leverage media resources
 - ? Local media markets require informed local spokespersons
 - ? Reaching the individual for social distancing information
- Rapidly changing epidemic conditions required individualized responses at the local level
 - ? State-level protocols likely would have increased the number of schools closed and not fit all local conditions
 - ? Local-level decisions acknowledge community-level conditions with both epidemic and local characteristics being taken into account

Acknowledgements

- Dallas County Health and Human Services Staff
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- Dallas County Medical Society
- Hospital Infection Control Preventionists and Physicians

